

Abstract

For measuring the concentration of a substance in body fluid, such as the glucose level in blood or tissue, a strip electrode (18) and a ring electrode (19) are arranged at the specimen. The ring electrode (19) is in direct electrical contact with the specimen while the strip electrode (18) is electrically insulated therefrom. The strip electrode (18) is arranged parallel to an arm or a leg for obtaining a large interaction length. The electrodes (18, 19) form a capacitor in a resonant circuit. A modulated voltage in the MHz range close to or at the resonance frequency is applied to the electrodes and the response of the body fluid is measured. This design allows a measurement of high accuracy.